

REMARKS

Applicant appreciates the indication of allowable subject matter, but respectfully disagrees with the claim rejections articulated in the Office Action. However, before detailing the bases of that disagreement, Applicant points out that the amendments herein address the claim informality noted by the examiner for claim 49. The amendments comport with the clarification suggested by the examiner.

In terms of substantive rejections, Applicant previously elected the “Group III” claims identified in the Restriction Requirement of 19 September 2006. The elected claims include 17-25, 41-47, 49, 50, 52, and 53. These elected claims relate to withdrawn independent claims 1, 26, 48, and 51, which the Restriction Requirement identified as generic.

The Anticipation Rejections

Against this backdrop, the current Office Action states that claims 1, 25, and 26 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. 6,853,675 to “Oleynik.” As a first point, all claims rejected as anticipated include explicit limitations directed to providing “broadcast services” to one or more mobile stations. No more than a simple, plain reading of Oleynik is needed to confirm that Oleynik has nothing to do with broadcast services, and the Patent Office obviously is using a legally impermissible, overbroad construction of the terms “broadcast services” and “broadcast stream” when it argues that Oleynik teaches the claimed broadcast services operations.

In more detail, claim 1 claims:

1. A method of providing broadcast services in a wireless communication network, comprising:
 - a. transmitting a broadcast stream originating at a content provider to
one or more mobile stations over a forward link broadcast
channel;

- b. monitoring utilization of forward link air interface resources; and
- c. dynamically adjusting the forward link air interface resources allocated to the broadcast stream responsive to changes in the utilization of forward link air interface resources; and
- d. scaling the quality of the broadcast stream responsive to adjustments to the allocated forward link air interface resources.

(Emphasis added.)

The instant application provides examples of what is meant by broadcast services. For example, at the top of page 5, the specification identifies exemplary air interface specifications for providing BroadCast-MultiCast-Services (BCMCS) via a wireless communication network as detailed in “the Third Generation Partnership Project 2 (3GPP2) specification titled CDMA High Rate Broadcast-Multicast Packet Data Air Interface Specification, Version 1.0 (Feb. 2004)(the BCMCS Air Interface Specification).” On page 6, lines 4-9, the specification also explains that, in one embodiment, reception of BCMCS services is enabled by a number of procedures described in “the 3GPP2 specification titled Broadcast and Multicast Services Framework X.P0019, Rev. 0.1.4 (March 15, 2004).”

Further, pages 4-6 of the specification as filed carefully describe one or more embodiments of BCMCS services, and provide specific explanations that such services “provide the ability to transmit the same information stream, referred to herein as a BCMCS stream, to multiple users simultaneously. BCMCS services may be used for video streaming applications and to provide videoconferencing capabilities to mobile stations 100.” (Specification, page 5, lines 5-9.) That same section of the specification also states that “[t]ypical video streaming applications include live broadcasts and video on demand (VOD).” Further, with reference to Fig. 2, lines 10-20 of the specification at page 5 state that:

In Fig. 2, a BCMCS stream flows from the BCMCS-CS 24 to a number of mobile stations 100, which may be in different sectors of the networks. A content provider 50 residing in either the core network 20 or in a PDN generates the content of the BCMCS stream, which may comprise a real-time broadcast or a stored broadcast program. The content is in digital form. If the content provider is outside the network, the content provider packetizes the content for delivery over the IP network to the BCMCS-CS 24 in the core network 20, which makes the content available to mobile stations within the wireless communication network. The BCMCS stream is duplicated at branching points within the network 10 to make the stream available to different sectors. One or more RBSs 36 broadcast the BCMCS stream to the mobile stations 100 over a forward broadcast channel.

(Emphasis added.)

In contrast, Olenyik has no discussion of broadcast services at all, because Oleynik has nothing to do with providing or managing broadcast services. Indeed, Oleynik in its entirety only uses the word “broadcast” a handful of times, and in all such instances it uses the term only to mean the transmission of a signal from an antenna—i.e., in Oleynik, the act of radiating a signal from an antenna is “broadcasting.” See, for example, col. 15, line 50, and col. 18, line 46, where Olenyik unequivocally uses the term “broadcast” simply to mean the transmission of one signal from one transmitter to one receiver.

While Applicant understands that examiners give claim terms their “broadest reasonable construction” during examination, examiners are bound by regulation and law to construe claim terms in light of the specification and in a manner consistent with the meaning one skilled in the art would give to such terms. Applicant adopted industry-understood meanings and gave careful examples for industry-based standards documents for the claim terms at issue, such as

“broadcast services” and “broadcast stream” appearing in claim 1. No one of skill in the art, and no one taking a fair reading of Applicant’s specification would understand Oleynik’s use of the term “broadcast” as used to connote the transmission of a single power control feedback signal between a transmitter and a receiver as having anything to do with the claimed invention.

It is irrelevant that Oleynik describes a direct sequence spread spectrum (DSSS) transmitter, and describes a “broadband” spread spectrum (SS) signal, because those teachings in Oleynik and that terminology simply identifies the use of Code Division Multiple Access (CDMA) technology in Oleynik. A CDMA-based signal may well be regarded as broadband, because of the inherent frequency expansion associated with the act of spreading. That characterization, however, has nothing to do with whether the resulting signal is logically formatted as a broadcast signal (point-to-multipoint) or a dedicated signal (point-to-point).

Thus, the Office Action states that Oleynik teaches claim 1’s limitation of “transmitting a broadcast stream originating at a content provider to one or more mobile stations over a forward link broadcast channel,” by illustrating the transmission of a “SS broadband signal” from a DSSS transmitter 300 to a DSSS receiver 200. Actually, the Office Action plays with the language of Oleynik by suggesting that the DSSS transmitter 300 transmits the signal to one or more receivers (mobile stations), with receiver 200 simply representing one such station.

The falsity of that assertion is given by the plain language at col. 7, lines 1-14, where Oleynik refers to the DSSS transmitter 300 and the DSSS receiver 200 as a transmitter-receiver pair, and makes clear that the DSSS receiver 200 generates power control feedback for the DSSS transmitter 300 based specifically on how the signal from DSSS transmitter 300 is being received at DSSS receiver 200. As those skilled in the art readily appreciate, Oleynik is describing a dedicated signal transmission having closed loop transmitter-receiver pair power control, and not a broadcast service or broadcast stream as Applicant carefully described and claimed.

Thus, the Patent Office is wrong by definition when it argues that Oleynik teaches claim 1's limitations of "dynamically adjusting the forward link air interface resources allocated to the broadcast stream responsive to changes in the utilization of forward link air interface resources," and "scaling the quality of the broadcast stream responsive to adjustments to the allocated forward link air interface resources." With no use or mention of broadcast services and broadcast streams, Oleynik obviously does not scale the quality of such streams.

Indeed, the sections of Oleynik referenced by the Office Action as teaching the claimed scaling of broadcast stream quality responsive to adjustments in forward link air interface resources simply teach the adjustment of transmit power at Oleynik's transmitter based on power control feedback from Oleynik's receiver. Such power control is done in Oleynik to maintain a desired received signal quality at the receiver and, by definition, does not involve a scaling of quality. Besides, it is wholly unclear what "quality scaling" might mean in the context of Oleynik, which does not relate to the transmission of digital content on a broadcast stream, where the bandwidth or other resources needed to support that stream may be reduced or modified by scaling the quality of the stream content.

With the above arguments in mind, Applicant respectfully submits that the anticipation rejection of claims 1 is without legal merit and must be withdrawn. For the same or similar reasons, the anticipation rejections of claims 25 and 26 should be withdrawn, as well.

The Obviousness Rejections of Claims 17 and 41

The Office Action rejects claims 17 and 41 under 35 U.S.C. § 103(a) as obvious over Oleynik in view of McGowan (U.S. 2004/0106423). Claim 17 depends from claim 1, and claim 41 depends from claim 26, which includes limitations the same or similar to claim 1. Therefore, the above distinctions made for claim 1 against Oleynik as an anticipating reference apply with equal force here to the obviousness rejections based on Oleynik in combination with McGowan.

Indeed, the obviousness rejections rely in whole on the anticipation arguments made for Oleynik with regard to claims 1, 25, and 26, and McGowen is used for its teachings regarding the transmission of frame error rate (FER) targets to a mobile station. In the context of claims 17 and 41, the Office Action equates the FER target transmission, which is used for power control, with the transmission of “broadcast service parameters” to a mobile station, to indicate the allocation of forward link air interface resources dedicated to the broadcast stream. For example, in its entirety, claim 17 claims:

17. The method of claim 1 further comprising transmitting broadcast service parameters to the mobile stations to indicate the forward link air interface resources dedicated to the broadcast stream.

Because Oleynik does not teach, suggest, or relate in any way to the transmission of broadcast streams, nor to providing broadcast services, and because McGowen does not provide such teachings, the obviousness rejection fails. It is also worth pointing out that the Office Action states that the motivation to combine McGowen with Oleynik would be so that one efficiently uses “the assigned spectrum.” It is unclear what this means, because the entire thrust of Oleynik is a power control feedback apparatus and method that supports the specifically described feedback-based power control between Oleynik’s transmitter and receiver.

Because Oleynik describes a complete solution with respect to his disclosed closed loop power control based on carefully defined and described feedback from the receiver, it is pure speculation as to whether the use of a frame error rate target as taught by McGowen would obviously add to (or even work with) the power control solution taught by Oleynik. One simply cannot drop a control parameter from McGowen into the different control framework of Oleynik and offer the conclusory statement that Oleynik would be improved thereby. Particularly where Oleynik describes a complete power control solution that is devoid of any mention of the

parameter the examiner attempts to lift from McGowen as an obvious drop-in improvement to Oleynik.

For the above reasons, the obviousness rejections of claims 17 and 41 fail as a matter of law. Applicant respectfully requests that these rejections be withdrawn.

The Obviousness Rejections of Claims 20, 44, 48-53

The Office Action rejects claims 20, 44, and 48-53 under 35 U.S.C. 103(a) as being obvious over Oleynik in view of McGowen, in further view of Diachina (U.S. 2003/0179738). All such rejections fail for the reasons given above against the anticipation rejections based on Oleynik, and against the obviousness rejections based on Oleynik taken in combination with McGowen.

Put simply, Oleynik offers no teachings relevant to the claimed limitations involving broadcast services and broadcast streams, and the attempted addition of teachings from McGowen and/or Diachina do not cure Oleynik's shortcomings. None of the references taken alone or in any combination teach or suggest the explicitly claimed limitations of the rejected claims and all such rejections therefore fail as a matter of law.

Closing

Applicant believes that the above arguments, along with the correction to claim 49, places all of the elected claims in condition for immediate allowance. Moreover, Applicant believes that all of the claims identified as generic by the Patent Office are allowable over the cited art, for the reasons given herein. As such, Applicant looks forward to the Office's next correspondence.

Respectfully submitted,



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